This document provides a summary of the Guadalupe Restoration Project, including background information on the project, clean up and restoration work that has been completed to date, and what work is still outstanding at the site.

A. Background

The Guadalupe site occupies over 2,700 acres of the larger Nipomo Dunes Complex and is located on the Central California Coast. The majority of the site is located in San Luis Obispo County, with a small portion located in Santa Barbara County. Figure 1 shows the location of the Guadalupe site.

The site is a very sensitive ecological area that is home to a number of Federal and State rare and endangered species such as the Snowy Plover, the California Red-Legged Frog, and La Grociosa Thistle.

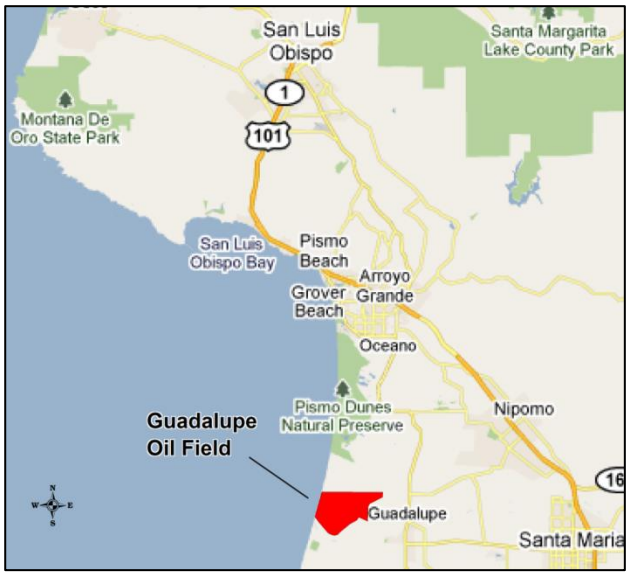


Figure 1 Guadalupe Field Location

The principal land use at the Guadalupe site, from 1946 to March 1994, was the production of oil and natural gas. Unocal was the operator of the oil field. In the 1950s, a petroleum hydrocarbon referred to as diluent was used to assist in the production of the heavy crude oil. Diluent is similar to kerosene. Diluent use ceased in 1990. Over the years, diluent was inadvertently released from the pipelines and storage tanks, and diluent sources are now present in soils and the ground water at the Guadalupe site.

Between 1988 and early 1990 diluent was spotted on beach sands and on some ground surfaces at the site. This lead Unocal to began site investigation work to determine the cause and extent of the diluent leaks at the site. Between 1992 and 1994 diluent was observed being released into the ocean. Diluent is a toxic material to humans, wildlife and plants, and therefore represented a risk to ecological and human health. In February 1994 the United States Coast Guard issued a directive to Unocal to prevent any further marine releases of diluent because it represented an imminent threat to the marine environment.

In 1994, Unocal began a large excavation project called 5X at the beach to attempt to stop the marine releases of diluent. This excavation was overseen by a number of Federal, State and local agencies and was done under emergency permits.

In 1994, the Regional Water Quality Control Board (RWQCB) requested that Unocal conduct further site investigations to determine the extent of the diluent contaminated soil, groundwater, and surface water. The results of this site assessment showed that there was extensive groundwater contamination with more than 80 different locations throughout the field that had underground plumes of diluent. Figure 2 shows the location of the major excavations sties at the Guadalupe Site. These areas of contamination are being excavated since they represented a threat to the sensitive ecological resources at the Guadalupe site.

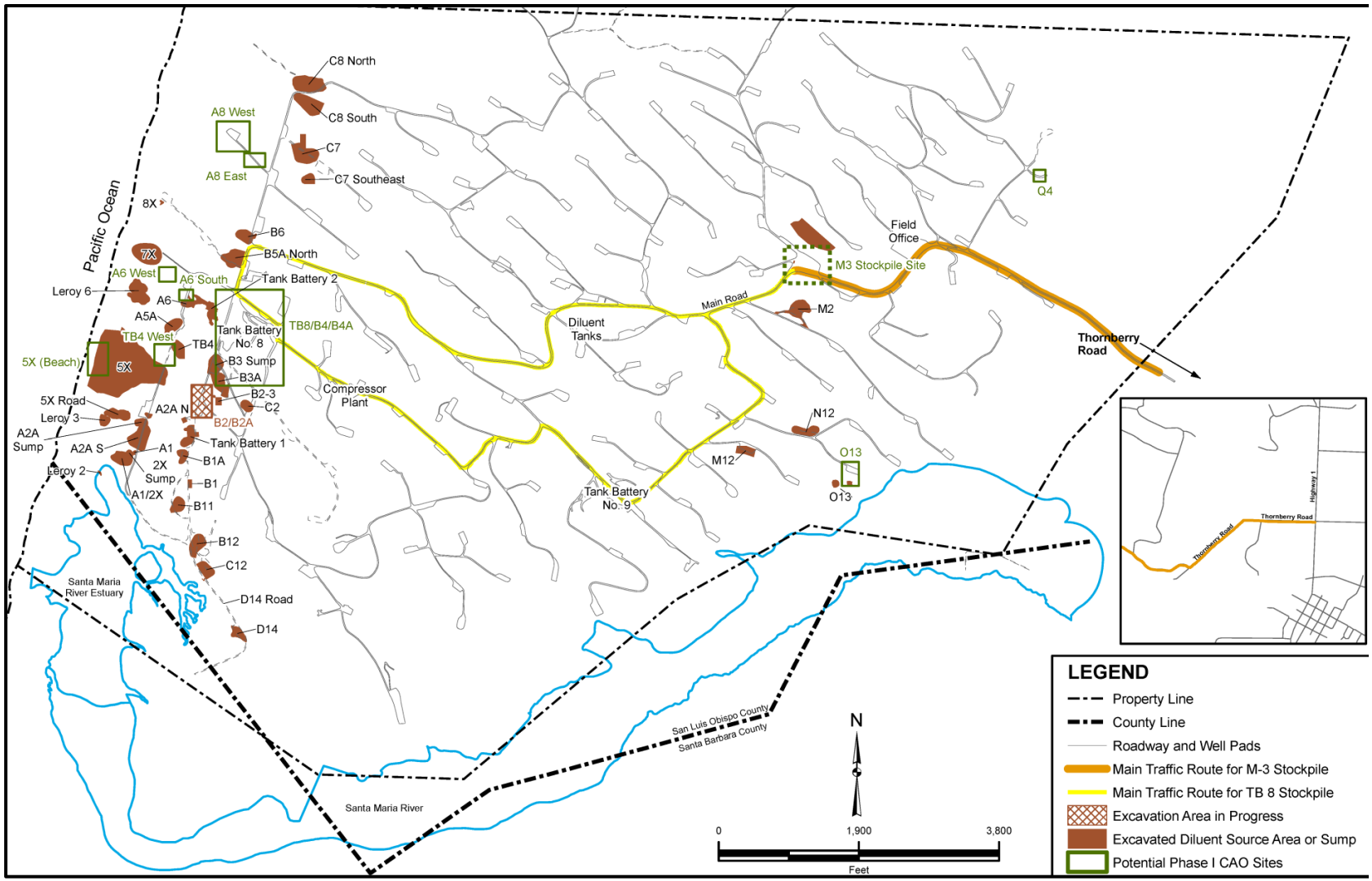


Figure 2 Location of Excavated Sites and Remaining Excavation Sites at the Guadalupe Site

In 1996, Unocal submitted applications to the County of San Luis Obispo and the RWQCB to remediate and restore some of the areas of the Guadalupe site. San Luis Obispo County and the RWQCB, as joint lead agencies, prepared an Environmental Impact Report (EIR) to address the proposed Unocal Remediation and Restoration Project.

When the EIR was completed, the RWQCB issued Cleanup and Abatement Order (CAO) 98-38, mandating remediation actions such as the excavation of specified sources and sumps. San Luis Obispo County then issued CDP/DP D890558D, which covered remediation and abandonment activities at the Guadalupe Field. This CDP/DP authorized Unocal to conduct remediation and site characterization activities at the Guadalupe oil field consistent with CAO 98-38 adopted by the RWQCB.

Permits for the remediation and restoration work were also issued by the California Coastal Commission (CCC), the California Department of Fish and Wildlife (CDFW), the United States Army Corps of Engineers (USACE), the United States Fish and Wildlife Service (USFWS), and the San Luis Obispo County Air Pollution Control District (SLOAPCD).

In 1999 Unocal began the restoration and remediation activates ordered by the RWQCB as part of their Cleanup and Abatement Order. In 2005 Chevron bought Unocal and took over the work at the Guadalupe site.

As part of the San Luis Obispo County CDP/DP permit, Chevron is required to fund through the County independent monitors to assure that the work at the site complied with all the County conditions of approval. In addition, the CCC, the RWQCB, the CDFW, and the USFWS permits require monitoring. All these agencies agreed to use the County monitors for their on-site monitoring requirements. This served to streamline the on-site monitoring process and reduce the overall monitoring costs. County monitors have been on-site for the last 11 years and it is expected that monitoring at the site will be required for another five to ten years.

The County monitoring contract covers on-site monitors, as well as time for reviewing and approving (1) excavation and wetland restoration engineering drawings, (2) work plans, and (3) a large number of compliance and reporting document required by various governmental agency permits. In addition, the monitoring contract includes time for the preparation of CEQA documents to address project modifications, which tend to occur with a project this large and complex.

As required by most of the agency permits, including the County, monitors must be on-site for Chevron to conduct remediation and restoration activities. The on-site monitors include wildlife biologists, botanists, construction engineers, and chemical engineers, as necessary. In addition, the monitoring includes a full-time Snowy Plover monitor during the breading season, which is a requirement of the USFWS permit.

The County on-site monitors work closely with Chevron and the various governmental agencies to assure that the work is completed in an environmentally sound manner consistent with all of the various agency permit conditions.

The County also coordinates a Multi-Agency Coordinating Committee (MACC) that was formed to oversee the restoration and remediation at the Guadalupe site. The MACC is comprised of Chevron and all of the governmental agencies that have issued permits for the restoration and remediation work. The MACC meets on an as needed basis to review progress at the site and to discuss outstanding issues. Guadalupe was the first project to establish a MACC to coordinate agency and applicant interaction on a project. The use of the MACC has been instrumental in building a strong working relationship between the applicant, the County (and its monitors), and the various governmental agencies, and has been one of the keys to the success of the project.

Figure 2 Excavation Work at M12

County monitors have been on-site for the last 14 years and it is expected that monitoring at the site will be required for another five to ten years.

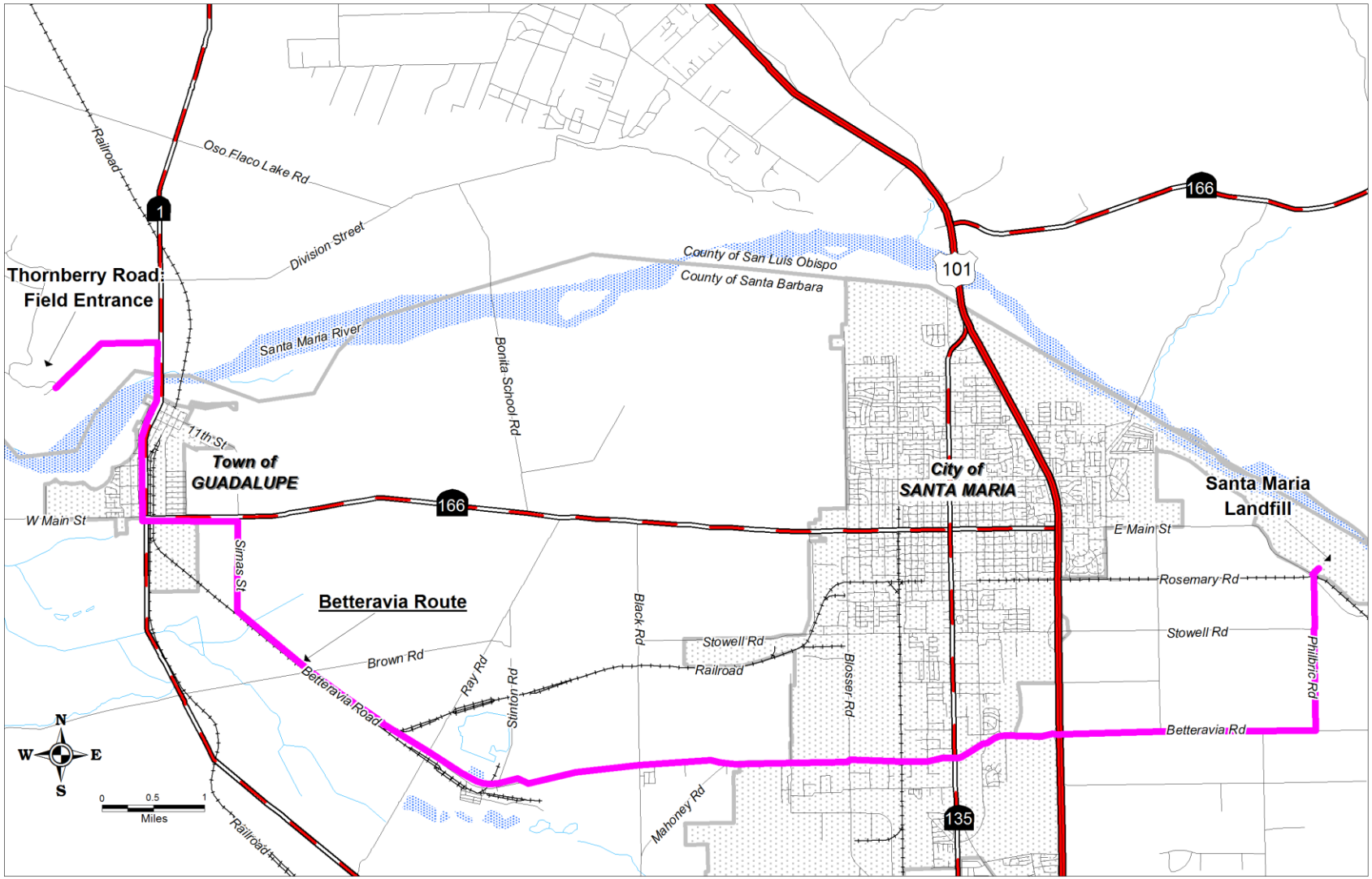
As required by various permit conditions, Chevron has established irrevocable protective easements over the Guadalupe site and is required to eventually dedicate the land to a public agency or private non-profit association as open space for habitat protection. It is likely this dedication would occur once the remediation and restoration of the site is complete in approximately five to ten years.

B. Trucking of NHIS to the Santa Maria Landfill

In 2005, Chevron received approval from the County to modify their permit to allow for off-site trucking of up 860,000 cubic yards to non-hazardous hydrocarbon impacted soil (NHIS) from the Guadalupe Restoration Site to the Santa Maria Landfill (SMLF). The SMLF uses the NHIS as cover for closing landfill cells. The County prepared a Supplemental EIR for off-site trucking to the SMLF. The County approved the trucking operations in 2006. The approved primary haul route was south on Highway 1 through the City of Guadalupe to Highway 166 to Betteravia Road to the SMLF. This route is shown in Figure 3a.

In 2011, Chevron submitted a permit request to the County to increase the total volume of material that could be transported to the SMLF by an additional 500,000 cubic yards, for a total of 1,260,000 cubic yards. An EIR Addendum was prepared for this permit modification, and the County approved the increase in volume in 2012. No request was made at that time to change the primary haul route.

Figure 3a Existing - Betteravia Truck Route to the Santa Maria Landfill



In March 2014, after the Willow Road interchange was completed, Chevron submitted a request to change their primary haul route from the current route to a new route, which would go north on Highway 1 to Willow Road, continuing east to Highway 101 and then south to East Main Street in City of Santa Maria and on to the SMLF. Figure 4 shows the location of the proposed primary haul route. The primary reasons for changing the primary haul route includes improved traffic safety (no at-grade railroad crossings, and fewer: stop signs, traffic lights, crosswalks, and controlled and uncontrolled intersections), would take approximately 25% less time per trip, and would avoid the trucks traveling through the City of Guadalupe and major portions of the City of Santa Maria. Willow Road is considered an arterial road that is designed and capable of handling this type of truck traffic. After considering potential environmental effects of this change (such as traffic, air quality, noise), no new significant impacts were identified and an EIR Addendum was determined appropriate. The Addendum is currently under preparation.

Since 2011, the peak number of truck trips per day between the GRP site and the SMLF has been fourty (80 one-way trips), with the average being about 19 truck trips per day (38 one-way trips).

C. Remediation and Restoration Activities Completed To Date

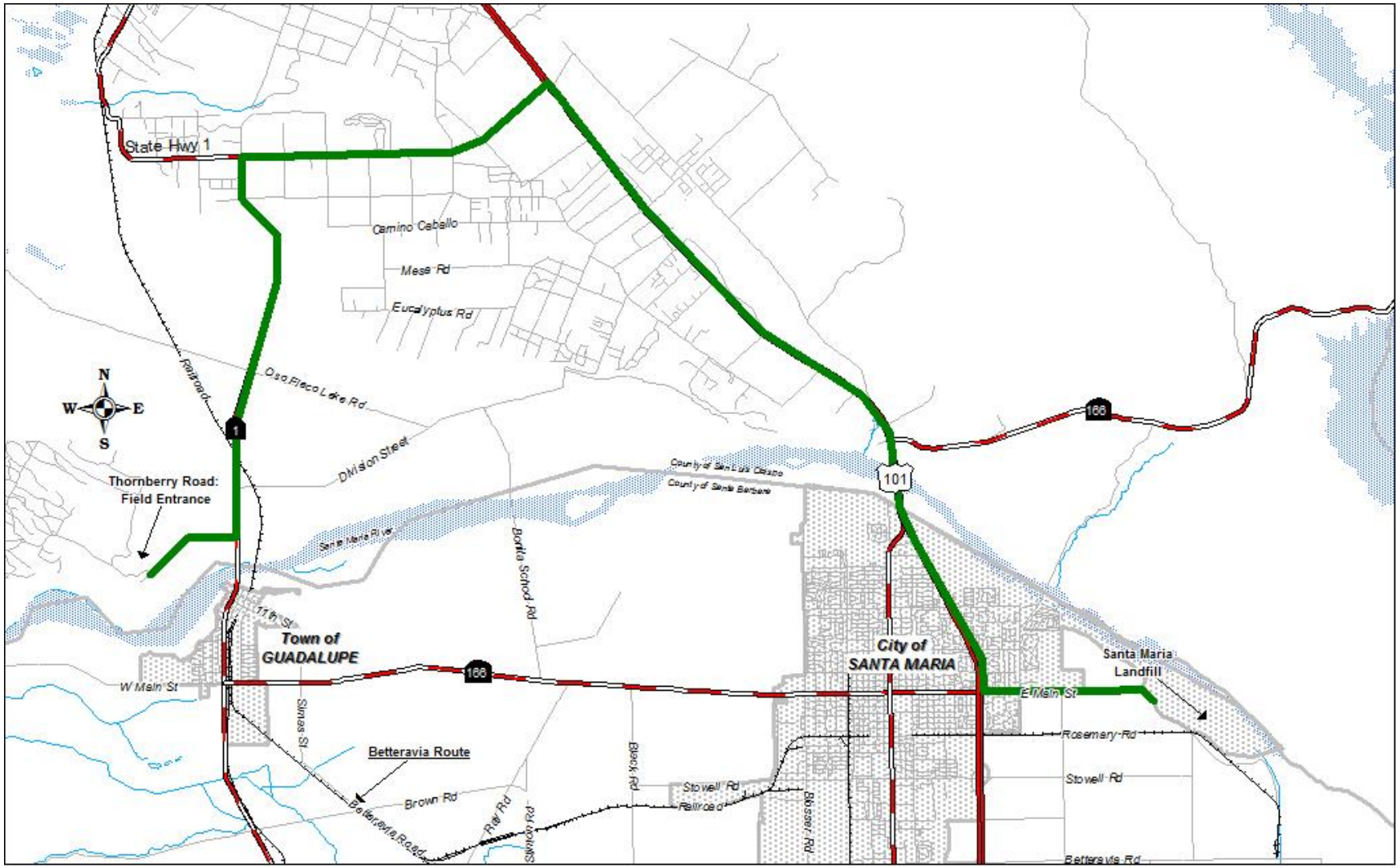
The Cleanup and Abatement Order issued by the RWQCB required cleanup and restoration of the Guadalupe site in phases. Chevron is nearing the completion of Phase I of the cleanup and restoration. The majority the cleanup work to date has involved the excavation of contaminated soil. Excavation work at the site is complicated by the sensitive ecological conditions of the site and the significant number of rare and endangered species. Further complicating a number of the excavations has been that fact that they were located in Federal and State Wetlands.

A substantial amount of cleanup and restoration has taken place at the Guadalupe site. Figure 2 shows the location of the excavations that have occurred at the site since remediation work began. The work that has been completed to date includes the following:

- Approximately 43 separate source plumes have been excavated to date (7 emergency, 9 pre-2002, and 27 since 2006).
- Over one-million cubic yards of contaminated soil has been cleaned up.
- A total of about 980,000 cubic yards of contaminated soil has been hauled to the Santa Maria Landfill for use as cover to assist in closure of the landfill. The California Department of Toxic Substance Control (DTSC) has determined that the material from the Guadalupe site is suitable for use as cover material at the Santa Maria Landfill.
- About 150 miles of pipeline have been removed from the site.
- Over 20 acres of wetlands have been created.

Typically three County monitors are on-site five days per week to monitor the remediation and restoration activities. Most of the time, multiple remediation and restoration activities are occurring at one time, which requires multiple on-site monitors in order to comply with various governmental agency permit conditions.

Figure 4 Proposed - Willow Road Truck Route to the Santa Maria Landfill



The working relationships that have formed between Chevron, the governmental agency staff and the County (and its monitors) have resulted in the design and implementation of excavations that have minimized impacts to the sensitive ecological resources, and the creation of wetlands that support large numbers of rare and endangered species.

The wetland creation program at Guadalupe has been recognized as one of the most successful in the state of California. This project has set a model of how agencies and an applicant can work together to implement a large and complex project. Attachment A provides various pictures of remediation and restoration work at the Guadalupe Site.

Figure 5 Loading Truck with Contaminated Soil for Transport to the Santa Maria Landfill

D. The Next Steps at the Guadalupe Site

Currently a number excavation projects and restoration projects are under way at the site. There are still a number of excavations that need to be completed as part of the requirements of the CAO. In addition, the RWQCB is evaluating a number of additional sites to determine if they should be included as part of the excavations.

The County is currently working with Chevron to address the removal of road, pads, and oil spray. Chevron is conducting a test program to evaluate various methods of pad removal, including excavation and various forms of ripping. The result of this test program will be used by the County to determine what methods should be used for the removal of the oil facility pads. It is expected that removal of roads, pads and oil spray areas should begin in late 2014.

Chevron is also required to monitor the created and restored wetlands, and restored upland habitat for a period of ten years to assure compliance with the restoration success criteria that have been approved by various governmental agencies including the County. As required by various governmental agency permits, the independent third party County monitors are required to be on-site until all remediation and restoration work at the site is complete.

Figure 6 Created Wetland at D14

It is estimated that completion of the excavations, removal of oil infrastructure (i.e., roads, pads, oil spray, etc.) is expected to be complete in five to ten years.

Various Stages of an Excavation

Vegetation

Sheetpile Installation

Excavation

Backfill

Recontouring Final

Fencing and

Various Phases of B12 Excavation

B12 Wetland Excavation December 2007

B12 Wetland Final Grade January 2008

B12 Wetland Created February 2010

D14 Created Wetland

D14 Pad Site: pre-excavation, June 2007.

D14 Site: post-excavation Final Grade, July 2007

D14 Restoration Site: post excavation, February 2010.